REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 11, 2007. Reconsideration and allowance of the application and pending claims 1-33 are respectfully requested.

Applicants wish to thank the Examiner for the following clarifications made during a telephone conversation on March 21, 2007. The Examiner indicated that claim 11 is not rejected under 102(e), but rejected under 35 U.S.C. 103(a) as being unpatentable over Peterzell et al. (U.S. Patent No. 6,694,129) in view of Isberg (U.S. Patent No. 6,029,052). The Examiner also indicated that claim 27, which was not listed in the claim rejections, is rejected under 35 U.S.C. 102(e) as being anticipated by Peterzell; and further that since claim 27 recites similar limitations as claim 20, the rejection of claim 27 is as stated in claim 20.

I. Claim Rejections - 35 U.S.C. § 102(e)

Claims 1-10, 12, and 14-27 stand rejected under 35 U.S.C. 102(e) as being anticipated by Peterzell et al. (U.S. Patent No. 6,694,129). For at least the following reasons, Applicants respectfully traverse this rejection.

Initially, Applicants note that under 35 U.S.C. 113, first sentence, an "applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented". In Peterzell, Figs. 6-8 do not correspond with any reference numbers, any descriptions, or any embodiments in the specification including the Brief Description of the Drawings (see col. 7, lines 28-32) and the Detailed Description (see col. 10, line 1, to col. 17, line 55). Consequently, it is also not clear whether Fig. 9 in Peterzell corresponds with the description in the specification including the Brief Description of the Drawings (see col. 7, lines 33-34) and the Detailed Description (see col. 11, lines 41, to col. 12, line 12).

A. Independent Claim 1

Peterzell fails to disclose or teach, "processing the *first baseband signal* using *baseband components*; and processing the *second baseband signal* using *the baseband components*" as recited in independent claim 1. The Office action, on page 3, refers to "Fig. 3, labels stage 2-4" as allegedly disclosing these elements.

Peterzell discloses operations in a receiver 101, wherein an RF signal 11 is conveyed along an RF signal path and preprocessed in stage 1, the preprocessed RF signal is downconverted to an IF signal in stage 2, the IF signal is downconverted to a baseband signal in stages 2-3, and the baseband signal is then sent to a baseband processor to be further processed in stage 4 (col. 4, lines 5-20; Fig. 2). Since stage 2 of the receiver 101 in Peterzell does not have a baseband signal, stage 2 fails to disclose processing a *first baseband signal* and a *second baseband signal*.

Peterzell appears to indicate a single path with a set of components in stages 3-4 of Fig. 3. However, Peterzell further states in col. 4, lines 34-40,

> To support multiple bands and modes of operation, receiver 101 must include some mode-specific components. For instance, in a multi-band receiver, an individual RF signal path is typically required for each frequency band. In a multi-mode receiver, individual baseband paths may be required for each mode depending on jammer dynamic range requirements.

Thus, the Peterzell multi-band and/or multi-mode receiver would have multiple paths with each having a set of components depending on the frequency band or mode. Since each path would have a set of components, Peterzell fails to teach processing a *first baseband signal* using *baseband components* and processing a second *baseband signal* using *the baseband components*. Therefore, Peterzell does not disclose or teach all the elements of claim 1.

Further with regards to claim 1, Peterzell fails to disclose or teach, "wherein processing the first baseband signal and the second baseband signal comprises *selectively filtering and selectively DC-offset correcting the first and second baseband signals*, wherein selectively

filtering and selectively DC-offset correcting comprises *selecting different filtering bandwidths* and *different DC-offset correcting bandwidths* based on *which system baseband signal is to be processed*" as recited in claim 1.

The Office action, on pages 3-4, states,

> Fig. 3, labels mode select and 70 show selectively filtering depending on the mode wherein each mode would inherently require a different filtering bandwidth and Fig. 3, label I Channel DC offset correction and Q Channel DC offset correction is inputted in to labels 105 and 100 which indicates the bandwidth or gain is adjusted depending on the labels I and Q Channel DC offset correction. Furthermore, Col. 9, lines 30-35 discloses an adjustable LO 350 depending on the operation of the frequency and Col. 10, lines 41-59 discloses the adjustable LO drive level can change DC offsets, wherein the DC offset must be removed before demodulation. Since the LO is adjustable and causes DC offset, an adjustable DC offset correction would be needed to compensate for the adjustable LO caused offset.

As mentioned previously, stage 2 of the receiver 101 in Peterzell does not have a baseband signal (col. 4, lines 5-20; Fig. 2). Therefore, the IF filter 70 of stage 2 fails to teach selectively filtering the first and second *baseband signals* or selecting different filtering bandwidths based on *which system baseband signal* is to be processed.

In Peterzell, Fig. 3 appears to indicate an I channel DC offset correction as an input to an amplifier 105 and a Q channel DC offset correction as an input to an amplifier 100. However, the Peterzell DC offset correction in Fig. 3 is *not* explained in the specification.

The Office action refers to col. 9, lines 30-35 in Peterzell, as disclosing "an adjustable LO 350 depending on the operation of the frequency" and col. 10, lines 41-59, as disclosing "the adjustable LO drive level can change DC offsets, wherein the DC offset must be removed before demodulation". However, these cited Peterzell sections refer to a direct conversion receiver and do not refer to the Fig. 3 receiver, which incorporates the superheterodyne architecture.

Further, Peterzell states in col. 8, lines 45-53,

> Fig. 5 depicts one RF signal path including one duplexer 312, one LNA 320 and one BPF 330. However, multiple RF signal paths may be included in receiver 200. Each signal path may correspond to one or more particular operating frequency bands of receiver 200. For instance, receiver 200 may include

respective Cellular, PCS, IMT, and GSM signal paths. Each RF path may include, as needed, a duplexer, switch, and/or bandpass filter, a LNA, a BPF, and I and Q mixers.

Since each path would have a set of components, Peterzell merely teaches removing a DC offset from the baseband signal. Peterzell does not teach selecting different DC-offset correcting bandwidths. Thus, Peterzell fails to teach *selecting different DC-offset correcting bandwidths* based on *which system baseband signal is to be processed* as described in claim 1.

Due to the shortcomings of Peterzell described in the foregoing, Applicants respectfully asserts that Petterzell does not anticipate Applicants' claim 1. Therefore, Applicants respectfully request that the rejection to claim 1 be withdrawn.

Because independent claim 1 is allowable over Peterzell, dependent claims 2-10 are allowable as a matter of law.

B. Independent Claim 21

With regards to independent claim 21, Peterzell does not disclose or teach, "means for processing the first baseband signal, wherein the means for processing the first baseband signal is used for processing the second baseband signal". Peterzell also fails to disclose or teach, "wherein the means for processing the first baseband signal comprises means for selectively filtering and means for selectively DC-offset correcting the first and second baseband signals, wherein the means for selectively filtering and the means for selectively DC-offset correcting comprises means for selecting different filtering bandwidths and means for selecting different DC-offset correcting bandwidths based on which system baseband signal is to be processed".

Applicants respectfully submit that for at least the reasons presented in association with claim 1, Peterzell does not disclose or teach all the elements of claim 21. Hence, Applicants respectfully request that the rejection to claim 21 be withdrawn.

Because independent claim 21 is allowable over Peterzell, dependent claims 22-27 are allowable as a matter of law.

II. Claim Rejections - 35 U.S.C. § 103(a)

A. Rejection of Claim 11

Claim 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Peterzell in view of Isberg et al. (U.S. Patent No. 6,029,052). For at least the following reasons, Applicants respectfully traverse this rejection.

None of the references disclose or suggest, "wherein *the baseband components* comprise bandwidth-switchable low-pass filters and *bandwidth-switchable DC-offset correction elements*" as recited in claim 11.

The Office action, on page 6, refers to Peterzell as disclosing, "'the baseband components comprise bandwidth switchable filters and bandwidth-switchable DC-offset correction elements' (Fig 3, label I and Q Channel DC offset correction, Col. 10, lines 41-59 describes the LO drive level causes DC offset and DC offset mut [sic] be corrected before baseband signal maybe demodulated"; and refers to Isberg as disclosing "using a low pass filters [sic] for baseband processing (Fig. 2, labels 42a-b)".

As mentioned previously in claim 1, Fig. 3 of Peterzell appears to indicate an I channel DC offset correction as an input to an amplifier 105 and a Q channel DC offset correction as an input to an amplifier 100. However, the Peterzell DC offset correction in Fig. 3 is *not* explained in the specification.

The Office action refers to col. 10, lines 41-59, as disclosing "the LO drive level causes DC offset and DC offset mut [sic] be corrected baseband signal maybe demoduled". However, this cited Peterzell section refers to a direct conversion receiver and does not refer to the Fig. 3 receiver, which incorporates the superheterodyne architecture.

Further, Peterzell states in col. 8, lines 45-53,

> Fig. 5 depicts one RF signal path including one duplexer 312, one LNA 320 and one BPF 330. However, multiple RF signal paths may be included in receiver 200. Each signal path may correspond to one or more particular operating frequency bands of receiver 200. For instance, receiver 200 may include respective Cellular, PCS, IMT, and GSM signal paths. Each RF path may include, as needed, a duplexer, switch, and/or bandpass filter, a LNA, a BPF, and I and Q mixers.

Since each path would have a set of components, Peterzell merely teaches removing a DC offset from the baseband signal. Peterzell does not teach "bandwidth switchable filters and bandwidth-switchable DC-offset correction elements" as stated by the Office action. Thus, Peterzell does not disclose or suggest that *the baseband components* comprise *bandwidth-switchable DC-offset correction elements* as described in claim 11.

Isberg also does not disclose or suggest that *the baseband components* comprise *bandwidth switchable DC-offset correction elements*. Therefore, even if combined, the references do not disclose or suggest all the elements of claim 11. Thus, Applicants respectfully request that the rejection to claim 11 be withdrawn.

Because independent claim 11 is allowable over Peterzell and Isberg, dependent claims 12-20 are allowable as a matter of law.

Additionally, Applicants respectfully submit that the combination of Peterzell and Isberg is not obvious. Isberg discloses that low pass filters are used to filter the quadrature signals in a direct conversion receiver in place of the band pass filters required in a typical superheterodyne receiver (col. 2, lines 33-38; col. 3, lines 57-69). Since the Peterzell superheterodyne receiver 101 does not use band pass filters to filter the quadrature signals (Fig. 3), there is no motivation or need to use low pass filters in place of nonexistent band pass filters for the Peterzell downconverter receiver (Fig. 5). Hence, combining Isberg with Peterzell would be fixing a problem of having band pass filters that do not exist in Peterzell. Thus, for at least the reasons stated above, Applicants respectfully request that the rejection be withdrawn.

B. Rejection of Claim 13

Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Peterzell in view of Robinett et al. (U.S. Publication No. 20020193108). For at least the following reasons, Applicants respectfully traverse this rejection.

For at least the reason that Peterzell does not disclose, teach, or suggest all the element of independent claim 11 and Robinett does not remedy such deficiencies, Applicants respectfully submit that dependent claim 13, which incorporates the allowable base claim features, is allowable as a matter of law. Accordingly, Applicants respectfully request that the rejection to dependent claim 13 be withdrawn.

C. Rejection of Claims 28-33

Claims 28-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Peterzell in view of Digital Video Broadcasting (http://.dvb.org) and further in view of IEEE 802.11a Standards. For at least the following reasons, Applicants respectfully traverse this rejection.

None of the references disclose or suggest, "a digital-broadcast system that shares the common baseband system with the code-division multiple access system" as cited in claim 28.

The Office Action states, on page 7, "Peterzell et al does not disclose processing digital broadcasted signals, but Peterzell et al discloses the system is compatable [sic] to process frequencies within a wireless LAN (802.11). (Col. 3, lines 30-40)."

Peterzell states, with emphasis added, in col. 3, lines 23-40,

> *The above figures-of-merit and signal phenomena should be considered when designing wireless communication devices.* More generally, the wireless communications landscape has been dominated by Code Division Multiple Access (CDMA), a form of spread spectrum, or broadband, communications in which radio signals are spread over a very wide bandwidth. CDMA technologies. CDMA technologies have been the basis for many modulation standards, such as CDMA (IS-95 and CDMA2000) and WCDMA (IMT2000). Each of these modulation or air-interface standards operates in many radio frequency bands, including Cellular (Japan Cellular and US Cellular), PCS (Personal Communications System in US and Korean bands), and IMT (International Telecommunication Union). *Other*

modulation standards include FM (frequency modulation, IS-19), GSM (Global System for Mobile Communications), US-TDMA (IS-136), GPS (Global Positioning Sytem, (Wireless LAN (802.11), and Bluetooth.

Applicants respectfully submit that col. 3, lines 30-40 in Peterzell appears to merely list modulation standards in the wireless communication landscape. Thus, Peterzell does not disclose or suggest that the system is compatible to process frequencies within a wireless LAN (802.11) as alleged by the Office Action.

Peterzell fails to disclose or suggest a digital-broadcast system that shares the common baseband system with the code-division multiple access system as described in claim 28. Therefore, even if combined, the references do not disclose or suggest all the elements of claim 28. Applicants respectfully request that the rejection to claim 28 be withdrawn.

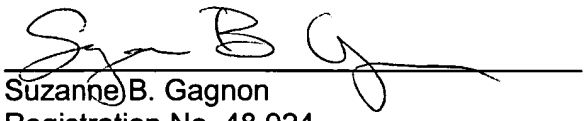
Because independent claim 28 is allowable over Isberg, Digital Video Broadcasting, and IEEE 802.11a Standards, dependent claims 29-33 are allowable as a matter of law.

CONCLUSION

Applicants respectfully submits that Applicants' pending claims are in condition for allowance. Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all finding of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all finding of well-known art and official notice, and similarly interpreted statements, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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